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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/738,374	12/15/2000	Toshikazu Funahara	36856.414	9810

7590 04/06/2004

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EXAMINER

KINKEAD, ARNOLD M

ART UNIT	PAPER NUMBER
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2817

DATE MAILED: 04/06/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/738,374

Applicant(s)

FUNAHARA ET AL.

Examiner

Arnold M Kinhead

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 13 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 7-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 7-9, 11, 13 and 16 is/are allowed.
- 6) ☒ Claim(s) 10, 12, 14, 15, 17 and 18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

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### DETAILED ACTION

The examiner has reconsidered the allowableness of the previously allowed claims:

#### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth

in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35

U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time

any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation

under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the

time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and

potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 10,12,14,15, 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Avanic et

al(5,650,755) in view of Morino et al(5,661,441) both of record.

The reference by Avanic et al discloses a VCO resonator package (310)with circuit substrate (302) and connections to the substrate being inherent(see figure 3); a shield(314) is shown bonded to the top of the resonator package(310).

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The reference does not show a center located cavity for the resonator, as well as a crystal type resonator, and lastly, the use of solder cream, for example, as an adhesive for the bonding to the shield.

The reference by Morino et al shows these ideas, see figure 1, and col. 2, where a cavity with walls is shown to receive the resonator package(1); use of solder cream (15) also aids to bond the package and hold it stably is noted. The particular type of resonator is not a crystal, however, this is simply another conventional art recognized equivalent resonator package that is notoriously well known in the art that allows for a particular VCO frequency of operation.

In light of the above it would have been obvious for one of ordinary skill in the art to have realized that the stability of Avanic et al vibrator package is due to the soldering of the package to the shield and that any conventional art recognized equivalent adhesive(thermoset epoxy or cream solder) is useable and would be within the level of skill for one of ordinary skill in the art. The crystal type of resonator being a notoriously well known art recognized equivalent resonator that may be used for the general resonator of Avanic et al. The cavity also lending to the secure placement on the substrate.

*Allowable Subject Matter*

4. Claims 7-9, 11,13, 16 and 19 are allowed.

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*Conclusion*

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The reference by Okeshi et al(US 5,880,553 ) shows use of an adhesive (32)to connect the shield(30) and the resonator(crystal type ,20).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Arnold M Kinkead whose telephone number is 703-305-3486. The examiner can normally be reached on Mon-Fri, 8:30 am -5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Pascal can be reached on 703-308-4909. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7724 for regular communications and 703-308-7724 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.



Arnold M Kinkead  
Primary Examiner  
Art Unit 2817

Arnold Kinkead

March 30, 2004